SAFETY DATA SHEET

1. Identification

Product identifier: CHEMWORLD CHILLER COOLANT 1000
Other means of identification: None.
Recommended use: COOLING WATER TREATEMENT PRODUCT
Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer
- Company name: ChemWorld
- Address: 885 Woodstock Rd. Ste 430-111
- Roswell, GA 30075
- United States
- Telephone: (800) 658-7716
- Website: www.chemworld.com
- E-mail: Sales@ChemWorld.com
- Emergency phone number: 800-255-3924 ChemTel

2. Hazard(s) identification

Physical hazards: Not classified.
Health hazards: Sensitization, skin

Label elements

Signal word: Warning
Hazard statement: May cause an allergic skin reaction.
Precautionary statement
  Prevention: Avoid breathing mist or vapor. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.
  Response: If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
  Storage: Store away from incompatible materials.
  Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC): None known.
Supplemental information: None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium molybdate</td>
<td></td>
<td>10102-40-6</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Boric acid</td>
<td></td>
<td>10043-35-3</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td></td>
<td>80 - 100</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed
May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling
Provide adequate ventilation. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.

Conditions for safe storage, including any incompatibilities
Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium molybdate (CAS 10102-40-6)</td>
<td>PEL</td>
<td>5 mg/m3</td>
</tr>
</tbody>
</table>

Material name: CHEM WORLD CHILLER COOLANT 1000
1800 Version #: 01 Issue date: 01-22-2016

SDS US
2 / 6
US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boric acid (CAS 10043-35-3)</td>
<td>STEL</td>
<td>6 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Sodium molybdate (CAS 10102-40-6)</td>
<td>TWA</td>
<td>0.5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

**Biological limit values**
No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Face shield is recommended. Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection**
Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Other**
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**
In case of insufficient ventilation, wear suitable respiratory equipment.

**General hygiene considerations**
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

### 9. Physical and chemical properties

**Appearance**

**Physical state**
Liquid.

**Form**
Clear Liquid.

**Color**
Blue

**Odor**
Characteristic

**Odor threshold**
Not available.

**pH**
6.0 - 7.0

**Melting point/freezing point**
< 40 °F (< 4.4 °C) estimated

**Initial boiling point and boiling range**
> 212 °F (> 100 °C) estimated

**Flash point**
None

**Evaporation rate**
Not available.

**Flammability (solid, gas)**
Not applicable.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)**
Not available.

**Flammability limit - upper (%)**
Not available.

**Explosive limit - lower (%)**
Not available.

**Explosive limit - upper (%)**
Not available.

**Vapor pressure**
< 1.0 mm Hg estimated

**Vapor density**
Not available.

**Relative density**
Not available.

**Solubility(ies)**

**Solubility (water)**
Complete

**Partition coefficient (n-octanol/water)**
Not available.

**Auto-ignition temperature**
Not available.

**Decomposition temperature**
Not available.
10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
No adverse effects due to inhalation are expected.

Skin contact
May cause an allergic skin reaction.

Eye contact
Direct contact with eyes may cause temporary irritation.

Ingestion
Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity
May cause an allergic skin reaction.

Skin corrosion/irritation
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation
Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization
Not a respiratory sensitizer.

Skin sensitization
May cause an allergic skin reaction.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens
Not available.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Prolonged inhalation may be harmful.
12. Ecological information

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects: No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT: Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not established.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not regulated as dangerous goods.

15. Regulatory information

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA.


SARA 304 Emergency release notification: Not regulated.


SARA 302 Extremely hazardous substance: Not listed.

SARA 311/312 Hazardous chemical: No.

SARA 313 (TRI reporting): Not regulated.

Other federal regulations: Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
Boric acid (CAS 10043-35-3)

US. Massachusetts RTK - Substance List
Not regulated.

US. New Jersey Worker and Community Right-to-Know Act
Boric acid (CAS 10043-35-3)

US. Pennsylvania Worker and Community Right-to-Know Law
Not listed.

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date: 01-22-2016
Version #: 01

Disclaimer
The manufacturer cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.